

REMARKS

In the Office Action dated April 8, 2005, claims 1, 4-8, 14-17, and 27-29 were rejected under 35 U.S.C. § 102 over U.S. Patent No. 6,795,912 (Itoh); claims 9, 10, 12, and 13 were rejected under § 103 over Itoh in view of U.S. Patent No. 6,718,373 (Bearden); claims 18-21 were rejected under § 103 over Itoh in view of Bearden and U.S. Patent No. 5,878,256 (Bealkowski); and claim 33 was rejected under § 103 over Itoh in view of Bealkowski.

Amended claim 1 is not anticipated by Itoh. Claim 1 now recites a boot image that comprises a system loader, a firmware patch, and a configuration file configured to direct the system loader to execute the firmware patch instead of an operating system on a subsequent boot. The firmware patch is configured to write a firmware upgrade to the programmable non-volatile memory, where the firmware patch comprises an install application, a firmware revision containing at least one instruction different from firmware within the programmable non-volatile memory, and a flash application having a bootable kernel, firmware update logic, and a non-volatile memory interface, where the firmware update logic is executable on the microprocessor to write the firmware revision to the programmable non-volatile memory.

The configuration file, which is part of the boot image, and which is configured to direct the system loader to execute the firmware patch instead of the operating system on a subsequent boot, is not disclosed anywhere in Itoh. The Office Action identified column 10, lines 47-57, of Itoh as teaching the configuration file. This cited passage of Itoh describes downloading information for booting a second operating system and executing a predetermined application under the control of the second operating system. Moreover, the cited passage of Itoh states that the information for booting the second operating system is composed of a boot image file, device drivers, and a secondary storage unit I/O patch program. Also, the cited passage in Itoh describes the boot image file of the second operating system as including a second operating system loader, a body of the second operating system, and the predetermined application to be executed under the control of the second operating system. This downloaded information, as taught by Itoh, does not contain a configuration file configured to direct the system loader to execute the firmware patch instead of the operating system on a subsequent boot.

The Office Action stated that “the information in the recited portion *must inherently* direct the microprocessor to one or more locations within one of the fixed storage devices and a random access memory, otherwise the second OS would never be loaded and executed.”

4/8/2005 Office Action at 16 (emphasis added). It is respectfully submitted that a configuration file configured to direct the system loader to execute the firmware patch instead of the operating system is *not* inherently part of the downloaded information taught by Itoh. The M.P.E.P. provides the following guidelines regarding a rejection based on inherency:

To establish inherency, the extrinsic evidence ‘must make clear that the missing descriptive matter is *necessarily* present in the thing described in the reference and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. *The mere fact that a certain thing may result from a given set of circumstances is not sufficient.*’ M.P.E.P. § 2112 (8th ed., Rev. 2), at 2100-54 to 2100-55 (emphasis added).

The Office Action has clearly failed to establish that the recited configuration file is necessarily a part of the system of Itoh. Indeed, a review of the detailed operational flow described in Itoh will reveal that such a configuration file is *not* used in Itoh. As described by Itoh, an OS switching and booting program requests “the hook of the OS termination” through the device driver for starting loading of a second operating system. Itoh, 12:7-9. Note that this OS switching and booting program is downloaded separately from the boot image file – in other words, the OS switching and booting program is *not* part of the boot image file that is part of the information downloaded in the discussion of column 10, lines 47-57. *See also* Itoh, 11:4-14. Upon termination of a first operating system in Itoh, whether a second operating system is loaded or not is based on whether the “hook of the OS termination” is present. Itoh, 13:4-15. This “hook of OS termination” requested by the OS switching and booting program does not constitute the configuration file, which is part of the boot image, and which is configured to direct the system loader to execute the firmware patch instead of the operating system on a subsequent boot. Therefore, in view of this, claim 1 and its dependent claims (including newly added dependent claims 34-36) are allowable over Itoh.

Independent claim 27 has also been amended to recite a fixed storage device containing a firmware patch and a configuration file configurable to select the firmware patch for execution on a next boot. Such a configuration file is not disclosed by Itoh.

Moreover, claim 27 recites that the firmware patch contains an install application (among other elements), where the install application is executable on the microprocessor to verify whether the second firmware is able to successfully upgrade the first firmware. The ability of an

install application, part of the firmware patch, to perform such verification is clearly not disclosed by Itoh.

In view of the foregoing, claim 27 and its dependent claims (including newly added dependent claims 39 and 40) are not disclosed by Itoh.

In view of the allowability of claims 1 and 27 over Itoh, it is respectfully submitted that the obviousness rejections of some of the dependent claims of base claims 1 and 27 over Itoh and other references have also been overcome.

Independent claim 18 was rejected as being obvious over Itoh, Bearden, and Bealkowski. It is respectfully submitted that a *prima facie* case of obviousness cannot be established with respect to claim 18 for at least the following two reasons: (1) no motivation or suggestion existed to combine the teachings of Itoh, Bearden, and Bealkowski; and (2) even if combined, the hypothetical combination of Itoh, Bearden, and Bealkowski does not teach or suggest all elements of claim 18.

The second point is addressed first. Itoh does not disclose modifying the configuration file in the firmware install patch to direct a system loader to execute the firmware install patch upon a subsequent microprocessor reset. The reasons that Itoh does not teach the configuration file of claim 18 are similar to the reasons with respect to claim 1. Bearden and Bealkowski also do not teach or suggest this feature. Therefore, even if Itoh, Bearden, and Bealkowski are combined, the hypothetical combination of these three references does not teach or suggest the claimed invention.

Moreover, there existed no motivation or suggestion to combine Itoh, Bearden, and Bealkowski. Itoh relates to loading a second operating system for the purpose of executing a predetermined application program to update the BIOS. On the other hand, Bearden relates to loading software onto blank hard disks of new computer systems in a build-to-order environment. Bearden, 2:21-22; 6:1-2. Bearden thus relates to efficiently manufacturing computer systems, with Bearden specifically directed to loading application programs, such as Microsoft 2000, Acrobat, and the like, onto blank hard disks over a network. Bearden has nothing to do with upgrading firmware in a programmable non-volatile memory. Therefore, a person of ordinary skill in the art would not have been motivated to combine the teachings of Bearden with Itoh.

Moreover, although Bealkowski is related to updating firmware in a data processing system, Bealkowski teaches that the firmware update utility is provided on diskettes. *See, e.g.,* Bealkowski, 9:11-13; 14:6-10, 15-17. The delivery of the firmware update utility on diskettes is inconsistent with the delivery of information over a network in Itoh or delivery of software in Bearden. In fact, the teaching in Bealkowski that the firmware update utility be delivered on diskettes would render inoperative the teachings of Itoh and Bearden, which require the group delivery of information over a network.

The above provides reasons that no motivation or suggestion existed to combine the teachings of Itoh, Bearden, and Bealkowski. For the foregoing reasons, a *prima facie* case of obviousness has not been established with respect to claim 18 or its dependent claims (including newly added dependent claim 38).

Amended independent claim 9 is also allowable over Itoh and Bearden. As noted above, no motivation or suggestion existed to combine the teachings of Itoh and Bearden. Therefore, a *prima facie* case of obviousness cannot be established with respect to claim 9 over Itoh and Bearden for at least this reason. Moreover, the hypothetical combination of Itoh and Bearden does not teach or suggest all elements of amended claim 9.


Claim 9 recites the firmware upgrade patch is executable in the respective computer systems to verify whether the revised firmware is able to successfully upgrade the common firmware version. Neither Itoh nor Bearden teaches this feature of claim 9. With respect to the rejection of dependent claim 20, the Office Action stated that Itoh teaches verification of a BIOS version to judge whether the update of the BIOS is necessary (Itoh, col. 18, lines 40-42). The cited passage of Itoh refers to a server verifying whether the BIOS upgrade is necessary, prior to downloading information to a computer from the server. In contrast, claim 9 recites that the *transferred* firmware upgrade patch is executable in the respective computer system to verify whether the revised firmware is able to successfully upgrade a common firmware version. Therefore, because the hypothetical combination of Itoh and Bearden does not teach or suggest all elements of claim 9, the *prima facie* case of obviousness cannot be established for this additional reason.

Claims dependent from claim 9, including newly added claim 37, are allowable for at least the same reasons.

Allowance of all claims is respectfully requested. The Commissioner is authorized to charge any additional fees and/or credit any overpayment to Deposit Account No. 08-2025 (10005272-1).

Respectfully submitted,

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Dan C. Hu
Registration No. 40,025
TROP, PRUNER & HU, P.C.
8554 Katy Freeway, Suite 100
Houston, TX 77024
Telephone: (713) 468-8880
Facsimile: (713) 468-8883